TITLE: Analysis of Dark Slope Streaks on Mars based on Multitemporal Imagery and Digital Elevation Model derived from HRSC Data

ABSTRACT BODY:

Abstract (2,250 Maximum Characters): Recurring slope lineae (RSL) on Mars are dark and narrow downhill oriented surface features found in equatorial regions (1) associated with water or hydrated salt flows (2). On the other hand there are Dark Slope Streaks which seem to be dry avalanches on dust covered slopes (3). The origin of both ist still under discussion. We found linear features in eastern Noctis Labyrinthus region (6°S, 265°E) with lengths of up to several kilometres and lateral extensions of 20-30 metres. RSL fade and
recur in the same location over multiple Mars years (4). Similarily, Dark Slope Streaks form on at least annual to decade-long timescales (5). During 10 years of HRSC observation time (2005-2015) several linear features in Noctis Labyrinthus changed in visibility. Slope
parameters and seasonal illumination conditions are investigated based on
a DTM derived from HRSC data. Also particle flow along streaks has been modelled. Feature and change identification is presented involving spatial filtering and DTM analysis.

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CURRENT * CATEGORY: Mars: Surface

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AUTHORS (FIRST NAME, LAST NAME): Bjoern P. Schreiner[1], Sebastian Walter[1], Jan-Peter Muller[2], Panagiotis Sidiropoulos[2]

INSTITUTIONS (ALL): 1. Geologische Wissenschaften, Freie Universitaet Berlin, Berlin, Germany.
2. Mullard Space Science Laboratory, UCL, London, United Kingdom.